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A priorism

from

Descartes to Kant,

by

John P. Ashley.

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Preface.

The aim of our thesis is to trace the existence and development of Apriorism from the time of Descartes to Kant, or in the period of the Newer Philosophy. It does not include the discussion of the relative merits or demerits of apriorism or empiricism. The plan adopted is to present so much of the theory of knowledge of each of the prominent thinkers of this period as may be necessary to indicated the relation of the apriori and empirical factors in their philosophy.

It will be observed that we have transferred Hobbes from his customary place at the end of Mediaeval Philosophy and have included his system in the treatment of our theme. The following reasons are submitted in justification therof.

I. Hobbes in several directions transcended the Baconian doctrine. This is especially noteworthy in his advocacy of the use of both deduction and induction as the scientific method.

II. Hobbes lived twenty-nine years after Descartes and almost three years after Spinoza.

III. He was acquainted with Descartes for fifteen years, and at his request, made through Mersenne, criticized his "Meditationes de prima philosophia." The criticism was published with the work and is known as the "Fourth Criticism".

IV. Hobbes' 'De Cive' was published one year later, his 'De Corpore' four years later, his 'De Homine' seventeen years later than Descartes' 'Meditationes' by which his views, especially as to mathematics, were modified.

V. Hobbes' philosophy well illustrates the existence of apriori elements in the darkest empiricism. Thus for our purpose his position the better falls after Descartes but before Locke.

Jena, Germany March 6th. 1894.

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Introduction.

Apriori truths in a philosophical sense, according to Aristotle, had reference to the causal, original and primary elements in the objective world.[1] He regarded them as first and fundamental truths which could neither be defined nor demonstrated. Apriori as opposed to aposteriori truths, during the entire period of Ancient Philosophy signified reasoning "from what is before" and aposteriori "from what comes after." Thus far the philological signification adequately expressed the philosophical concept, but since that time the words have been used to denote much more amplified and weighty conceptions. In mediaeval times Raymond Lully (1235 A.D.) first employed the substantives 'prioritas' and 'posterioritas' to signify a somewhat broader notion than that of Aristotle.[2] The terms are first defined by Albertus Magnus (1390 A.D.) as follows:[3] Demonstratio quae-dem est procedens ex causis ad effectum et vocatur demonstratio apriori et demonstratio propter quid et potissima.... Alia est demonstratio procedens

1. Erdmann, Sec. 86:4. 2. Ibid. Sec. 206:7.
3. C.L. Prantl's "Geschichte der Logik im Abendlande" Vol. IV: 78.

ab effectibus ad causas, et talis vocatur demonstratio aposteriori quia et demonstratio non potissima."
Hugo Grotius (1583, A.D) employs them in a somewhat special sense.(1) "Whether anything is, according to natural law can be established apriori and aposteriori. The former takes place when it is shown that the universal validity of the subject of proof follows from human nature as destined for society, the latter, on the other hand, when from its universal validity we may conclude that it lies in the nature of man."
Peter Gassendi (1592 A.D.) ridicules the terms and declares that one would come nearer the truth if he reversed their meaning.(2)
In modern times, Leibnitz used the terms quite frequently and Wolff gave them still further prominence, though as yet they had not attained their full significance. Berkeley employs the term apriori, in a more definite sense, than the writers before him, to denote reasoning from causes to effects, from abstract notions to their conditions or consequences, and also from propositions or assumed actions. He says,(3) "I think

1. Erdmann Sec 254:6. 2. Gassendi's Works. Bk II: Ch.5.
3. Berkeley's "Principles of Human Knowledge" Sec 21

arguments aposteriori are unnecessary for confirming what has been sufficeintly demonstrated apriori" John Heinrich Lambert (1728 A.D.) affirmed the universal validity of apriori knowledge and also its absolute independence of experience.(1) This approaches the Kantian, the present meaning, of the word. To Kant, every power of mind, every form and law of thought, every judgment, proposition and truth, which the mind produces out of itself, independent of experience, is apriori. Says Sir Wm. Hamilton.(2) "The term apriori by the influence of Kant and his school is now very generally employed to characterize those elements of knowledge which are not obtained from experience as factitious generalizations, but which, as native to, are potentially in the mind antecedent to the act of experience." Finally, if we accept Professor Liebmann's definition of apriorism as "The reason by and for itself," as the latest signification of the word, we must conclude that, as such, it owes its proper epistemological import to the Kantian philosophy

1. Neues Organon Sec. 639. 2. Reids' Works pp. 762.
3. Die Analysis der Wirklichkeit p. 209

and did not exist before that time. Nevertheless it would be entirely incorrect to allege that therefore apriorism had no veritable existence in the pre-Kantian philosophy. Rather, the fact is that apriori elements have been present in the systems of all who have contributed anything to the problem of knowledge, though they may have been unconscious of the fact.

It is evident, then, from this brief history of the word, that it has been employed to represent many distinct phases of thought. Further examination will show that innate ideas, innate propositions, innate judgments, universal and necessary truths, innate powers, forms and laws of thought, in different times, have been expressed by the word apriori.

We turn now to the development of its philosophical content and begin with the apriorism of the 'epoch-making' philosopher Descartes.

Descartes.

Descartes began his philosophy with a theory of knowledge. He affirmed that to know of what human knowledge consists and how far it may extend is the most important question of human inquiry. The first thing to know is intellect, for upon our knowledge thereof is grounded all other possible knowledge. His method is introspective. He looked within and discovered that most of his beliefs were disconnected, indistinct, accidental and grouped, if at all, by the chance conjunctions of experience. Hence they must be rejected or established upon a rational and unquestionable basis. Such a basis he proposed to find in a proposition so fundamental and indubitable that it might serve as the ground of all our rationalizations. And since it is generally conceded that the senses often deceive us; since also it is obvious that our judgments are often erroneous, we cannot depend unconditionally either upon the senses or upon reason. How and in what, then, can such a proposition be

found? He answers in the method "De omnibus dubitandum est," and forthwith proceeds to reject every proposition that can be doubted. Even pure mathematics suffers temporary repudiation at the hands of this new method of knowledge building But there is one proposition that cannot be doubted I cannot doubt that I who doubt exist for the more I doubt the livelier is the consciousness of my existence. From this simple ever-persistent consciousness of self nothing more fundamental can be abstracted. It is involved in all knowledge and cannot be explained unless we have an explanation which is prior to the basis of knowledge itself. The subjective unity of thought and being in self consciousness, then, is presupposed in all knowledge. Hence 'Cogito ergo sum' is the fundamental and indubitable proposition upon which all knowledge may be built and is founded upon the mind's simple intuition of its own existence and identity.

That this is a proposition which cannot be doubted is obvious, but it is as unproductive as true. Other

propositions, e.g. 'Ex nihilo nihil fit,' or 'the half is not equal to the whole', are as manifestly unquestionable on which no one dreams of building a theory of knowledge Indeed Descartes himself does not build upon his great discovery. Not the fact of thinking but the clearness and distinctness of the conception becomes his criterion of truth. But having established his test of truth he asks 'May not even the most vivid conceptions deceive us? Can we be sure that some powerful evil spirit is not sporting with our intellects and deluding us? We find his answer in his "Doctrine of Innate Ideas" the form under which Descartes' apriorism exists and which we now present.

In the third Meditation[1] Descartes distinguishes between three kinds of ideas with respect to their origin. First, there are ideas (innatae) born in us, which we do not make for ourselves, from ourselves, or receive from without. They are conceptions of things, thoughts and truths which inhere in the proper nature of the mind. Second, there are ideas (adventitiae) given to us from

1. pp. 17.

without, such as the notion of tree or horse. Third, there are ideas produced by ourselves, such as the notions of sirens, hippogriffs, etc. Among innate ideas are reckoned the conceptions of God, reason, being, triangle, and especially all those conceptions which represent any true unchangeable and eternal reality.[1] These are the characteristics which distinguish innate ideas from non-innate. The number of the former, then, must be legion, since all geometrical conceptions possess those characteristics.

First and foremost among innate ideas is the idea of God. This is the sine qua non of the Cartesian philosophy. Starting out from the fact that we possess the God idea, Descartes affirms that as finite beings we could not evolve it from self, nor yet could it be a product of sense-perception. Further, having the idea of God as containing all thinkable perfections, we can add nothing thereto nor take anything therefrom. But, he continues, ideas are copies of an ideatum whose reality must be equal

1. Letters to Mersenne. Epistola 99.

or greater than the representative ideas. They are derived from something extra-mental which contains at least as much actual reality as the idea has mental reality. And since we have not produced the idea of God, nor found it outside of self, it must have been communicated to us by a being who is infinite and therefore able to furnish us with the idea of the infinite possessed by all. But how was the God-idea communicated to us. God impressed it upon us when he created us, just as an artist leaves his individuality stamped upon his work. The idea of God is therefore innate, even as the thought of self is innate. Descartes concludes that since we have the God idea, the corresponding ideatum must exist, therefore God is, as the being who contains in his actual self all that is represented in the idea.

Manifestly, this is Anselm of Canterbury brought again from the tomb, but not to a resurrection of eternal life. Kant showed once for all, as Aquinas had done in part before

him, that in all our reasoning concerning the existence of God there is not the least evidence of the divine existence. The implications and determinations of logic are logical not ontological. All that the idea of a being than whom a greater cannot be conceived logically implies is the idea of the infinite One.

It would be unfair to Descartes, however not to note the use he here makes of the law of causality. The idea is produced by the ideatum, and if the law of causality holds good, the cause must be adequate to the effect, i. e, infinite. Therefore God exists. If ideas were stereoscopic pictures of something extra-mental, there might be a semblance of plausibility in this reasoning, but since they are categories inherent in the mind, the argument fails, unsustained by crude psychology and bad logic. Concerning the idea thus obtained, Descartes says, in answer to those who claimed that it was obtained by dropping out all limitations of the finite, (1) "I ought never to suppose that my conception of the infinite is a negative

1. Meditation III. pp. 21.

idea got by the negation of the infinite, just as I conceive repose to be a mere negation of toil, or darkness to be the mere absence of light. On the contrary I see manifestly that there is more reality in the infinite than in the finite substance, and that therefore I have in me the notion of the infinite even, in some sense, prior to the notion of the finite, or in other words, that the notion of myself, in some sense, presupposes the notion of God."

For an innate idea this is rather a complete and elaborate conception. It would also be interesting to learn how there can be a notion of the infinite prior to self consciousness, which in the outset Descartes made the ultimate and indubitable basis of all knowledge. But having secured the existence of the Infinite One, it necessarily follows that he is the author of the system of which I am a part and hence the author of my mind. And since a God of infinite perfections could not be guilty of creating a reason whose normal processes would deceive us, the final guarantee of the trustworthiness of all our perceptions which

are clear and distinct, is the divine veracity. Consciousness, therefore, is reliable so long as it does not transcend itself, nor postulate anything beyond itself.

The first criticism made against this view was that it proved too much, since it warrants the conclusion that error is impossible. In reply, Descartes correctly affirmed that belief is a free act and that we may consent to allow ourselves to be led into error by acting in accordance with indistinct and unclear conceptions, and by believing in part only or not at all when our conceptions are most vivid and distinct. Thus not the reason as given by God is faulty, but a wrong use of our untrammelled volition leads us astray.

A second criticism charged Descartes with reasoning in a circle. Now, it was asked, could God's truthfulness be a guarantee for a principle (viz., that clearness of concept is the test of truth) which we must use in order to prove the divine existence. The criticism is laid aside by showing that we are compelled first to rest upon the consciousness

of self as found in us, but by reflection it becomes clear that this self consciousness is only individual and that every individual self consciousness must rest upon the consciousness of God, the universal consciousness, else all knowledge is ultimately groundless.

Passing from Descartes test of truth and final warrant for the trustworthiness of our faculties, we come to a more general consideration of his apriori ideas. No definite number or exact order is ascribed to them. Indeed, having been introduced they seem thenceforth, at least in his principal works, to be neglected. In his letters however more attention is given to them. They are described as arising out of our own proper consciousness, and as universal and necessary truths, which do not rest upon sense-perception, nor upon any arbitrary activity of the imagination.[1] Among the innate individual ideas are the conceptions of substance, extension, mind, thought, truth, God, etc, none of which in any sense are the products of experience.

1. Princ. Philosophia I: 17 and Meditation III.

Must it then, he asks, be affirmed that these ideas were clearly apprehended by the new-born babe at its birth or while yet in the womb. He replies, 'by no means. Though the child as yet unborn may be conscious of self and possessed of many innate ideas, reflection and education are necessary for their clear and distinct apprehension.'(1) They are innate not as explicit ideas, but as implicit. The inateness, therefore is virtual and not actual. The ideas will come into consciousness only as suitable conditions are provided.

Beside simple innate ideas there are also a multitude of axioms which are innate.(2) Among them are found the principle of contradiction "It is impossible for a thing to be and not to be at the same time," the proposition, "Ex nihilo nihil fit," and also the mathematical axiom, "If two things are equal to the same thing they are equal to one another." Such truths are self-evident, universal and necessary. They originate not in experience, nor yet are they self-produced. They arise from the minds inherent capacity for thinking and for truth. This capacity

1. Princip. Philosophia Part I: 22, 75.
2. Part I: 49

is God-given. So are the laws of thought, the truths of number, etc. They need only to be recognized in order to conduct to truth. By simple reflection, independent of experience we may attain to insight into the nature of some propositions and discern that their validity admits of no exception. Hence reason in its normal exercise is able to ascertain the truth of such propositions on its own account. Nevertheless it must be confessed that the truth of these axioms may dawn upon us gradually, and to some may never be evident.

Descartes' doctrine of innate ideas is further elaborated in his view of the subjectivity of sense-perception. Since in sense-perception no properties of the external object pass into our conceptions, and since also the intermediate antecedents are not perceived by us, the idea and form of the impressions is innate. So much the more must the ideas of pain and color, etc, be innate since they possess no likeness to the occasioning object. He states his view thus: "When we put on the one side all that belongs to intelligence, and on the other, all that belongs to matter, there is a residuum in our ideas

which cannot be reduced to either head. Among these are appetites, passions, & sensations of pain, pleasure color, smell, taste and touch. They must be referred to a union of mind and body. They indicate that something is taking place in our body or without, and so stimulate us to some kind of action, but what it is that is taking place they do not tell us. Sensations lead us into error only when we are not conscious that their office is merely practical and when we attempt to make objective judgment by means of obscure and confused ideas. The remedy against this error is a clear conviction of the subjectivity of sensation."[1] Evidently here is a psycho-physical or a physico-psychical realm from which all rational processes are excluded, for Descartes has already made thought a property of a substance which can apprehend nothing but thoughts, and is therefore excluded from this mixed realm of mind and body. Thought, therefore, being confined to the circle of ideas has no power to apprehend anything outside itself. But since there is another substance whose

1. Prin. Philosophia Part I. 66.

property is not thought but extension, there ensues an irreconcilable dualism. Obviously then, in Descartes' method of establishing the subjectivity of sense-perception, we have extreme idealism on the one hand and a vague sensationalism on the other.

We cannot here further examine Descartes' philosophy of mind without entering the domain of metaphysics which would carry us beyond the limits of our theme. We may however legitimately refer to his two fundamental modes of thought, viz, by perception and volition. A distinction is made between ideas passive and active. Adventitious ideas enter ready-made into a passive mind without any exercise of the will. Says Descartes,[1] "It seems to me, that in receiving such and such an idea the mind is passive, and that it is active only in volition; that its ideas are put in it partly by the objects which touch the senses, partly by the impressions in the brain, and partly by the dispositions which have preceded in the mind itself and by the movements of the will." How the empiricist and the idealist

1. Oeuvres inedites de Descartes IX, 166.

come to have such different conceptions of these adventitious ideas is left unexplained. We have here also crudest Empiricism (ideas being put in the mind etc.) together with an undue exaltation of the will at the expense of the intellect. Both arise from the failure to discern the presence of volition and rational process in the lowest forms of sensation. Impressions are rationalized into sensations only as the mind is directed to them for that purpose, though we may not be conscious of the volition or the reasoning, until we set about to analyze and explain what has really taken place.

Notwithstanding the prevalent unclear and incomplete thinking in Descartes' philosophy, there exists much valid apriorism. Self-consciousness, all our conceptions of reason, thought, substance extension and God, are therein shown to be apriori, as are also many axioms, judgments, and all universal and necessary truths. His greatest need was to see that ideas are not copies of an ideatum, not effects produced by an extra-mental object, but conceptions arising

from the structure of reason, and based upon some category inherent therein. This would have greatly changed his theory of knowledge, and would probably also have materially modified his metaphysics. We pass now to Malebranche who developed the idealistic phase of Descartes system, and to Spinoza who developed its pantheistic phase.

Malebranche.

Notwithstanding Malebranche's prominence in modern philosophy, he did not contribute much to the establishment of an intelligible apriorism. He does not diverge so far from Descartes as is usually affirmed. He rather makes explicit what is already implicit in Descartes, yet there are some real differences. Descartes ideas were copies of an ideatum, were effects produced according to the law of causality, but to Malebranche they are merely conditions of the soul. They are not mental pictures representing things, and through which we know things. Indeed neither things nor their images are ever seen. Whence, then, our ideas? They are not innate, nor yet

produced by volition, which at most could furnish only the condition and occasion, neither are they created in connection with every new perception. They are always present to us, though we, through attention, may not notice them. All ideas are in the divine mind, God himself is the "place of spirits," hence all ideas and all spirits are brought together in God. Knowledge of the world of things is attained only as we apprehend their ideas in God. We, therefore, "see all things in God," who allows us to share in his seeing.

A second divergence from Descartes is in connection with the nature of the idea of God. To Descartes it was a copy of an infinite ideatum, an idea distinct from its reality. Malebranche asserts that it is not merely the God-idea, but God himself that is present to our minds. This is in accord with the view that God is the "place of all spirits."

A third divergence concerns the idea of self-consciousness. Descartes' "cogito ergo sum" is based upon the consciousness of self as thinking, but Male-

branche identifies the idea of the conscious self with the idea of God, and makes self-consciousness proper to signify only a consciousness of desires and feelings. This is in harmony with the view that the mind does not apprehend anything, even itself, except in and through the idea it has of the infinite.

Malebranche agrees with Descartes in attributing error not to the untrustworthiness of our clear and distinct conceptions, but to the wrong use of the power of assent without which error is impossible. He also agrees with Descartes as to the subjectivity of sense-perceptions, but more closely relates sensation to rational knowledge. In harmony with the view that we never perceive things but only their ideas, he affirms that all those qualities by which we usually describe the nature of things are ideas existing only in the soul. He further agrees with Descartes' view as to the aprioriism of all geometrical and logical truths, and advances beyond it in affirming that even physics will some day rest upon apriori truths. We now turn to the phase of Cartesianism as developed by Spinoza.

Spinoza.

Spinoza's contributions to apriorism are not as significant even as those of Malebranche. He begins his system with the notion of unconditioned substance,- which equals God,- and views it as the ground from which all thoughts and things are deduced by merely logical determinations. Since, however, many individual things so deduced are conditioned by each other, there is an element of chance that cannot be deduced, and experience is necessary to determine their exact nature. Accordingly there are two kinds of ideas adequate or complete and inadequate or fragmentary. The former are in the complete possession of the mind, are fully known, absolutely certain and eternal. The latter exist partly in one mind and partly in other minds and therefore do not come under the complete control of any individual mind. Hence they are inadequate, mutilated, untrustworthy and transitory. They arise out of the imagination which in turn is constituted out of their sum total. The existence of

these 'imagines' is taken for granted and the imagination is imagined out of them. And all have been deduced from the infinite substance, God, the facts of error and evil not excepted.

Just as the imagination consists of the sum total of mutilated ideas, so the mind is composed of all adequate ideas, but its essence consists in a knowledge of its body. In the same way, the infinite mind is the sum total of all ideas and its essence likewise consists in a knowledge of infinite extension. The soul therefore is but an idea of the body, and the body the object of the soul. Thus Spinoza gives us an idea without a mental subject capable of predication, and an object contemplated by an idea. But such an outcome is an inevitable result of the doctrine of a doubleface substance with distinct, independent and incommensurable attributes of thought and extension, without any possible ground of unity. True a semblance of unity is furnished by predicating both attributes

of the same thing, but it speedily resolves itself into pure idealism or nonsense. Independent attributes end in pure idealism. Incommensurable attributes destroy all hope of unity. Predicating them of one substance is nonsense since it presupposes a mind capable of such a judgment. If there is such a mind anywhere Spinoza has not provided for it in his system, and it therefore must be a 'mens ex machina'. To say that the attributes are identical, but viewed from different standpoints they are distinct, is to engulf knowledge in the vortex of relativity, and solipsism is supreme. He also fails to distinguish between thought as an event and as product; between the latter as universal elements in thought and the former as formal or individual elements. To him the order and connection of our thoughts is the same as those of the objective world. Rational processes are but repetitions of objective processes, and our individual thoughts but movements in infinite thought. Hence the question of the relation of

the one and the many, fatal to Xenophenes, Parmenides, Zeno, and the entire Eleatic school, is also decisive against Spinoza. Evidently, in the language of Erdmann, [1] "Spinoza passed from the principle of his philosophy to something which abrogated it."

Little as Spinoza may have contributed to the establishment of a rational and valid apriorism, his fundamental proposition implies that his entire system is apriori. The deduction of all finite thought from the infinite thought, though crude as a theory of knowledge, nevertheless indicates that he believed that we attain to knowledge independent of experience. Further all adequate ideas were to him, universal, necessary and eternal and hence apriori. Indeed like all the Cartesians he placed so much emphasis on the unity and universality of knowledge, as to leave no room for the formal differences and multiplicity of aspects in knowledge which he disregarded as mere opinion. In so doing he prepared the way for

1. Erdmann. Sec. 273:1.

a reaction in favor of the empirical school which emphasized individualism and differences in knowledge.

This brings us to the consideration of the relation of the English philosophers of this period to apriori theories of knowledge. We begin with Hobbes.

Hobbes.

It is customary to head the list of experience philosophers with the name of John Locke, "the father of modern empiricism. An examination of Hobbes' "Human Nature" and his "De Corpore", makes it evident, however, that significant apriori elements in knowledge were recognized much earlier than the time of those whom we are wont to consider the champions of sensationalism. While we do not for a moment contend that his system is not confessedly Empirical we do claim that it also contained apriori factors. He affirmed that "(1) every man brought reason into the world with him as one of his natural faculties." "(2) Reason is a gift of God, and a word of God intended to

1 Computation or Logic I:1, or Vol IV:2.
2 Vol. III:359. Vol. IV:116.

be for a light to him." Its dictates are laws, not made, but eternal.(1) They are the same in all men.(2) Hence, (3)"All men by nature reason alike and well when they have good principles. For who is so stupid as both to mistake in geometry and also to persist in his error when another detects it to him." Moreover in the very outset of his Leviathan, Hobbes claimed that philosophy contains many cognitions inferred by mere reason. All computations of numbers are of this sort since the units have been fixed by us irrespective of external objects. His attitude on the question of method is also germane to the point. As Erdmann(4) well notes the whole of the sixth chapter of 'De Corpore' treats of the difference between the analytic and synthetic methods, and in direct opposition to Bacon's demand for the exclusive use of induction, Hobbes strenuously insists that both methods are necessary. We may therefore legitimately conclude that, according to Hobbes, reason and its laws are apriori, since they are independent of experience, universally

1. Vol. III: 378. 2. Vol. IV: 87.
3 " " " 4. Sec 256: 2

valid and necessary. Nevertheless he also held that thinking may be a property of matter, and since matter is outside of thought [if we allow that matter is] the explanation of the intelligent world is outside itself.

In his explanation of the origin of the faculties Hobbes furnished a suggestion which has been much used in later times.[2] "Reflection," he says, "is the successive change of diverse desires; the last victorious desire immediately preceding the performance is called the Will." It is but one step in analogy to affirm that the intellect is but the last surviving thought of a series, a view held and loudly proclaimed by Hume, Mill, Wundt and James.

Further Hobbes distinguishes between original sense knowledge and scientific knowledge. The first is an incontrovertible proof of his empiricism but the second suggests aprioriism in that it affirms the strict subjectivity of sense-perception. The effect in us of an external excitant is so utterly different from the movements in the objective stimulus as to

1. Falckenberg. Hist. Phil. pp. 64
2. Hobbes Works Vol. IV. 27

show that our sensations and perceptions can be only subjective. Again, in his definition of experience as "the sum total of what is found in memory", it is manifest that we may not hope for unconditioned certainties from that source. Hobbes admits that so long as we are confined to the plane of mere experience we can attain only to propositions of more or less probability. By analogy we may inductively pass from one event to another like it, without thereby making it absolutely certain that the future will be as the past. To be sure thus far in our history day and night have succeeded each other without any deviation from their mutual round but this is no guarantee that it will be so for ever.(1) Hence so long as experience is the only source of knowledge we can not attain to universal and necessary truths.(2) But many such truths do exist and are so ultimate as not to admit of demonstration, and since they are unconditioned by experience they are apriori.

1. Vol. I, 130.
2. " " 81.

But whence arises their universal and necessary validity? Hobbes replies, partly from self and partly from the nature of the proposition. "Propositions which we receive for truth we always grant for some reasons of our own which are derived from the proposition itself or from the person propounding it."(1) Further in part this universality is said to rest upon our arbitrarily fixed definitions of words. The proposition "man is a living creature" when interpreted as the living-created-man, "is a living creature" is made up of terms which have such definite meaning, that once we have the conception we may reproduce it ad libitum.(2) Its necessary validity will be manifest under all circumstances. And since we give to our words universal meanings, we may attain to apodictical science whenever we are able, through the mind's own power to produce the thoughts we desire to demonstrate. Thus it is in geometry where the demonstrable certainty depends upon the condition that

1. Vol. IV: 302.
2. " I: 48.

the thinker himself create the figure in order to perceive its properties.

Without entering further into the epistemology of Hobbes it is evident that in connection with his crude sensationalism there are also many significant apriori elements. Reason, laws of reasoning, mathematical and other propositions of universal and necessary validity unconditioned by experience, as well as the subjective origin and exclusive subjective signification of sense perceptions are sufficient testimony to Hobbes' apriorism. So incongruous, however are his theories that the saying of Cicero which Hobbes hurls at his assailants, (1) viz, "There can be nothing so absurd, but may be found in the books of philosophers," is veritably applicable to his entire system.

We continue our search for apriori factors in empiricism and turn now to the doctrines of John Locke.

1. Vol. III. 83.

Locke.

Locke's aim is to discover the extent of the mind's capacity for knowledge, and the limits of the comprehensible. To ascertain these is a pre-requisite of all scientific research. His first postulate is that every person is conscious of having ideas, without which knowledge would be impossible. Whence do these ideas arise? His answer is, that no matter how fundamental, ultimate or complex our ideas may be, experience is their common source. Descartes' innate ideas are rejected on the ground that their existence is a mere assumption contrary to fact. If ideas, such as Descartes enumerates, were innate every human being, - children and savages alike, - would have them. But Locke holds that they are the product of an advanced state of civilization, and that many children and uncivilized peoples know nothing about them whatever. Hence experience alone is the source of all our ideas.

There are two kinds of ideas, simple and complex

The latter are formed out of the former, and hence all knowledge, and all morality have the simple ideas common to all men as their ultimate basis. In what experience consists we are not told. Locke himself had no definite idea of what it implied. But he distinguished between two kinds, first that which is dependent on the senses, and, second, that wherein the mind is aware of its own operations. The former is sensation or sense-perception, the latter is self consciousness or reflection. Neither kind is clearly defined, indeed the conception varies according to the point at issue. In Bk II: ch I: 23, he states that, "Sensation is confined to impressions or motions made in some parts of the body," hence sensation is here identical with sense-impression, whereas his general view makes it equal sense-perception. But a consistent, rational view of sensation as sense-impressions rationalized and interpreted by a unitary Self would have been fatal to his entire theory of knowledge. Then, too, while reflection

is usually regarded as a strictly passive process, it is also (beived as an "inner sense" which carries the light of its own evidence and does not admit of external proof. What this inner sense can be except unconditioned reason is not evident. By these two kinds of experience, however, we are furnished with a knowledge of the world of substantial things, and all the categories of thought, as space, time, number, infinity, power, substance, personal identity, causality, etc. "It is not in the power of the most exalted wit or enlarged understanding to invent any new simple ideas not taken in, in one of these two ways."(1) The mind is a "tabula rasa", and all its ideas are due to the influence of phenomena upon the senses, or to reflection thereon.

Locke also rejects Descartes' view that certainty rests upon the clearness and distinctness of ideas, and holds that ideas are neither true nor false.(2) They are nothing but bare appearances in the mind, whose validity depends on our perception of the agreement or disagreement

1. Bk II: Ch 12: 8 Sec.
2. " IV pp. 140.

of their relations. He also distinguishes between certain real knowledge, and certain knowledge. He says, "When we perceive the agreement or disagreement of any of our ideas there is certain knowledge, and when we are sure these ideas agree with the reality of things, there is certain real knowledge."(1) This perception of agreement or disagreement is by the senses. He asks, "How may I be certain that a ball of ivory which lies before my eyes is not square? Is it not by my sense of seeing?(2)"

In the face of such naive empiricism it would seem futile to search for apriori factors in the system of Locke. Further examination, however, shows them to be abundant. We have already noted the implication of unconditioned reason in his notion of reflection. It is now evident also, that his theory of knowledge must collapse unless we allow that it contains implicitly an active faculty of knowing. Locke himself does this unconsciously when he speaks of the activity of the 'tabula'. He concedes that "ideas are the immediate objects of the mind in thinking.(3)" The

1. Bk. IV. 4:18. 3. Bk II: p/p 145.
2. " " p/p 140.

admission is also made that the mind "has the power of enlarging indefinitely some of the ideas we receive from sensation and reflection."[1] The third of his four classes of ideas also contains an apriori factor. The ideas of this class are produced only when "the mind turns its view inward upon itself," i.e. by reflection pure and simple. The attempt to deduce the categories leads to the same result. Locke[2] affirmed that while we cannot conceive any object whose existence is boundless there is "something in the mind" which compels us to view time and space as limitless. Hence the mind adds something on its own account to the simple ideas of extension and succession found in experience. So also in his notion of substance there is an apriori element. The operations of the mind compel us to posit something, not given in experience, back of phenomena, to which as qualities phenomena must belong.[3] The notion of causality also yields the same result. He admits that the intellectual demand for the cause of an event is unavoidable, and claims that it is due to "our

1. Bk. II - pp. 132. 2. Bk II: 8: 21. 3. Bk I: 4: 18.

constant observation of the fact that qualities and things are produced by antecedent qualities and things. But it is obvious that no mere reference to phenomena furnishes an explanation of the mind's demand for an adequate cause, hence it must be contained in the structure of reason. This is what Locke in a measure does, when he says, "Our clearest idea of power is got through our consciousness of our own voluntary agency and therefore through reflection[1]." His idea of identity also requires an apriori conception to render it intelligible. To him identity is an experience of the same things in different times. What it is that recognizes the common rational content which constitutes the similarity, and how its recognition is possible, are undreamed-of questions to Locke.

Besides the apriorism involved in his attempt to deduce the categories there are many propositions that are apriori. Locke concedes that a large number of universal judgments possess an unconditioned, necessary, and as far as experience goes, independent

1. Bk. IV. Ch. 21.

validity. Nevertheless he denied that they are innate and claimed that their universal validity arose from the clear insight we have into the nature of all the terms of such propositions. When we have clear insight into the meaning of two conceptions we are able to affirm with certainty their agreement or difference.(1) Thus we need only to know what the words man, horse, red, and blue signify in order to come to the judgments 'man is not horse', 'red is not blue.'(2) This same insight is the ground of the universality of all axioms. So soon as we can represent the terms of an axiom to ourselves distinctly, we have an intuitive knowledge of its necessary validity. Common sense, inner reason, or in later phraseology, spontaneous thought assures us of this without demonstration.(3)

Locke also held to the subjectivity of sense-perception. The alleged ability of an object to produce in us sensations say of pink and green is confessedly so unlike the sensations produced that the quality of the latter must lie in us.

1. Bk IV: Ch. 7: Sec. 2.
2. " " 7: 4.
3. Bk I: Ch. 3: Sec. 4

If not, where? Finally in mathematics also there are many propositions of necessary and universal validity which, from experience can neither be refuted nor in any strong sense of the word, established. They are absolutely independent of experience and hence are apriori. They are not made nor unmade by our work in geometry, the aim of which is to show if the geometrical figures yield in the actual what they express or do not express in the conception.

Thus in Locke's explanations of his magnificent anthology of the facts of consciousness, in spite of his intent to the contrary, there abound many apriori factors.

Passing by Condillac's reduction of Locke's views to pure sensationalism, by the elimination of the second kind of experience, viz, reflection, we turn our attention to its development into pure idealism by Bishop Berkeley.

Berkeley.

Berkeley concerned himself but little with the origin of our ideas or with the possibility of apriori knowledge. His splendid contributions to philosophy are chiefly metaphysical but inseparably connected with his theory of knowledge. From scepticism irrational in itself but logically deduced from the unwarranted assumptions of empiricism, he took refuge in idealism. He begins by positing an ego and calls it mind, soul, spirit and self. This perceives, remembers, judges, is entirely distinct from ideas, and conditions all ideas, since the existence of an idea consists in its being perceived.(1) The self then is not a 'tabula rasa, but a "thinking active principle that knows, wills and operates about ideas."(2) Its existence is legitimately inferred from its reasonable acts.

Beside spirit there exists but one other object, viz, the idea of which the spirit is conscious. "All actual existence must be a conscious mind, a mind perceiving or an idea perceived."(3) Of these ideas there are three kinds. First, those presented by the senses. Second, those

1. Prin. Human Knowl. Sec 2. 2. Berkeleys Works by Fraser Vol I: 329 & 443
3. " " I: 331

of which we are conscious in our thoughts, feelings, desires, and volitions. Third, representation of these in imagination and memory. Berkeley rejects (1) the notion of all abstract ideas save that of the relations among ideas. Only individual ideas exist, the universal idea is but the idea of a particular thing. (2) Neither are ideas causes, as asserted by Plato, but inert, inactive objects of the understanding which subsist not by themselves but are supported by or exist in minds or spiritual substances. (3) Representative ideas in the sense of Descartes and Locke are also rejected. It is held that "our knowledge of things by representative ideas is no farther real than the supposed originals, which are unknown and unknowable." (4) "An idea can be like nothing but an idea". Hence so long as we depend on representative ideas we can never be sure that we have any real knowledge. (5)

The cause of ideas is an incorporeal active substance or spirit, though we can never be conscious of their cause. (6) Indeed there can be no other agent or cause anywhere than spirit.

1. Principles. Sec. 6. 2. Intro to Prin. 3. Prin. Sec. 89. Siris Sec. 335.

Hence all our mental objects arise from the constant action of the supreme intellect upon the finite mind.(1) But it must not therefore be inferred that the normal objects of perception and the ideas of imagination are one, or differ only in clearness or vividness, since the latter are produced by our own activity and will, while the former are the product of the divine intelligence and will. The former, too are universal, the latter, individual.

Berkeley's doctrine of perception is ambigious. Sometimes it denotes a self conscious act of perceiving, at other, the objects of perception. When it denotes the latter they must be recognized as real things. "Ideas imprinted on the senses are real things or do really exist."(2) They are to be viewed as external in respect to origin since they are not generated from within, but imparted by a Spirit distinct from the one which receives them. They may also be said to be without the mind in another sense, viz, when they exist in some other mind, as e. g., "when I close my eyes the objects I saw may still exist but it must be in another

1. Erdmann Sec. 291:7
2. Principles ... 89

mind."

Such in brief is Berkeley's theory of knowledge. We cannot avoid the conclusion that it is emphatically empirical, yet it contains some hints of apriorism. To begin with, while ideas of sense objects arise from the action of the supreme mind upon our minds, it is the finite mind's own activity that "knows, wills, and operates about them."[1] But by what laws can it "know, will and operate about them" save by those inherent in itself? Then, too, where does it, the individual mind come from? Is it, also, the product of experience? Again the mind 'remembers' the ideas imprinted upon it by the supreme intellect. By what powers except those inherent in itself and essential to the structure of reason is the soul able to remember? Further the soul 'judges,' but judgments are apriori. They imply insight into the essential connection between subject and predicate. But empiricism dealing only with phenomena, or with the ideas of phenomena, can affirm nothing concerning such a connection. This is the province of reason alone, and is inac-

1. Vol. I: 329.

cessible to experience. Berkeley seems to apprehend this truth when he says, "To perceive is one thing, to judge is another. So likewise to be suggested is one thing, to be inferred is another. Things are suggested and perceived by sense. We make judgments and inferences by the understanding."(1) Further, also, he recognizes the necessary inadequacy of the senses to give knowledge, even if their objects are imprinted by the supreme mind. Repeatedly he states that the senses give nothing but color, form and extension, and affirms that strictly speaking the senses know nothing.(2) Finally, he holds that all sense qualities are in the mind.(3) Thus, while the undisguised empiricism of Berkeley's epistemology is, on every hand, obvious, there is also intermingled much implicit apriorism.

It is next in order to prosecute our inquiry in the development of Locke's philosophy into nihilism by — perhaps the greatest and most adversely misunderstood of English philosophers — David Hume.

1. Vol. I. 388-9.
2. " II 460. Siris 253.
3. Princ. Sec. 8

Hume.

Hume's aim is not the destruction of knowledge as many truly pious people think, but rather to build up a consistent theory of knowledge, upon the psychology of Locke. He rejects the notion of self on the ground that it cannot be derived from any single impression.[1] Self is but a collection of impressions and other men are but "a bundle or collection of different perceptions which succeed each other with inconceivable rapidity and are in perpetual flux or movement."[2] The so-called mind "is a kind of theatre where several perceptions successively make their appearance, pass, repass, glide away, [Who is the spectator?] and mingle in an infinite variety of postures and situations. There is properly no simplicity in it at one time nor identity in different. The comparison of theatre must not mislead us. They are the successive perceptions only that constitute the mind, nor have we the most distant notion of the place where these scenes were represented, or the materials of which it is composed."[3] How it is possible to describe this performance so accurately is not quite plain, since by hypothesis there is no audience present, there must

1. Treatise on Human Nature etc. Part IV. Sec. 6.
2. Green & Grose Phil. Works of Hume. Vol I: 533
3. Treatise—Part IV

be somebody 'behind the scenes,' and who more likely than the author himself.[2] It is concluded however that our notion of a self or of personal identity is a fiction arising from the fact that "the passage of the thought from the object, before the change of the object after it, is so smooth and easy that we scarce perceive the transition, and are apt to imagine that 'tis nothing but a continuous survey of the same object.[1]" The contents of this alleged mind are impressions and ideas. The latter are copies of the former, and may be called faint impressions. In conscious experience there is nothing but impressions, individual and distinct. From them our simple ideas are derived and correspond to and exactly represent them. They are divided into sensation and reflection. The process of obtaining ideas is as follows: "An impression first strikes upon the senses and makes us perceive heat or cold, thirst or hunger, pleasure or pain of some kind or other. Of this impression there is a copy taken by the mind which remains after the impression ceases, and this we call an idea.[2]" Memory reproduces impressions vividly, imagination faintly, the faint impressions being

1. Green & Gross. Vol I: 536.
2. Treatise Part I: Sec. 2.

perfect ideas. Abstract or universal ideas are merely copies of a particular impression conceived in a particular way. They are related by subjective association.(1) "All resembling impressions are connected together and no sooner one arises than the rest follow." The qualities from which this association arises and by which the mind is thus conveyed from one idea to another are three, viz., "Resemblance, Contiguity in time or place and Cause and Effect."(2) The ability to relate, combine, discriminate and abstract these ideas is only a particular mode of mental experience. In experience it is impossible to discover any rational and necessary connection between ideas; we find only customary succession or a mere conjunction of impressions.

All knowledge is divided into two classes. It is either a relation of ideas or a relation of facts. The former relation is dependent on the law of identity, the latter, on the law of causation.(3) The first form of truth is verbal or mathematical and merely affirms the predicate which may be discovered by analyzing the subject. The second form is mere opinion since it is based upon the notion of causality, which has no other foundation but habit. "All our

1. Green & Grose Vol. II. 82.
2. " " " I. 319.
3. " " "

reasonings concerning causes and effects are derived from nothing but custom and that belief is more properly an act of the sensitive than of the cognitive part of our nature.(1)"
The two test questions which determine the value of any book for real knowledge, are, "Does it contain any abstract reasonings concerning quality or number? No. Does it contain any experimental reasonings concerning matters of fact or existence? No. Commit it then to the flames, for it can contain nothing but sophistry and illusion.(2)"

Thus in Hume's theory of knowledge there is no unitary self; nothing which can be conscious of succession in consciousness; no real connection between co-existing qualities nor between cause and effect. All that is found in experience is particular and distinct impressions in disconnected and groundless sequence. Hence, follows the impossibility of rational experience and speculative knowledge. The philosophical Samson has overthrown the Philistines once for all, but the temple of knowledge is also destroyed. Such is the outcome of Locke's theory made consistent. Hume does not accept it as final, and to save himself

1. Green and Grose. Vol I. 476.
2. Treatise - Part IV. Sec 2.

from mental collapse falls back upon practical instincts. (1)
But mathematics is not involved in this general overthrow, hence it may reasonably be suspected that Hume's philosophy also contains some apriori elements.

We find our first verifying evidence in his notion of number. The ultimate facts are only distinct unit perceptions, whence, then, the numbers which indicate quantities so great that they cannot be brought into contact with experience? Only from the unifying work of the mind which is here interpolated Hume virtually acknowledges this in the appendix to the 'Enquiry', where he states that 'the mind has command over all its ideas, and can separate, unite, mix and vary them as it pleases.(2)" Further, he concedes that there are many propositions intuitively and demonstrably certain, which are not deduced from, but are universal and independent of experience. They are discovered by the pure act of thinking, without being conditioned by any external object. That the square of the hypotenuse is equal to the squares of the other sides is a proposition expressing a relation between ideas implicit in the notion

1. Green v Grose. Vol. I: 476.
2. " " " 555.

of triangle. That 3×5 is equal to the half of thirty expresses a relation between these numbers which is absolutely unconditioned. Hence all mathematical axioms are universally valid and necessary. It is impossible to conceive their contradiction. In other words they are apriori but Hume has no suspicion of the synthesizing work of the mind in producing these propositions for intelligence. On the other hand the contradiction of real facts is ever thinkable. That the sun may not rise in the morning is just as intelligible a proposition, and just as free from contradiction as the contention that it will rise. Hence the practical validity of real facts, which has its ground in habit is entirely different from the universal validity of mathematical propositions.

Hume also suffers some mental qualms concerning his theory of causation, and of personal identity. Concerning the first, which has previously been declared to be only a 'propensity to feign' he writes, "[1] In order to justify myself I must distinguish in the imagination between the principles which are permanent, irresistible and universal, such as the customary transition from causes to effects and from effects to causes from

1. Treatise - Part IV. Sec. 4.

those" that are not so. But what principles except a priori principles are permanent, irresistible and universal? Concerning the second he states, "I find myself involved in such a labyrinth, that I must confess that I neither know how to correct my former opinions nor how to render them consistent.[1]" When he looks at his table and chimney, all his perceptions are particular, but they are so bound together by a principle of connection that they compel him to attribute to the perceived objects simplicity and identity. But only a mental self, operating under the categories of time, space, number, substance and cause, could predicate this simplicity and identity of any object of perception. Hume, however, would not acknowledge this and reaffirmed that the mind can never discover any connection among distinct ideas, hence to him the problem of knowledge is hopeless. He sums up the matter as follows. "In short, there are two principles which I cannot render consistent, nor is it in my power to renounce either of them, viz., that all our distinct perceptions are distinct existences and that the mind never perceives any real connection between them. Did our

1. Green & Grose. Vol. I: 538
2. " " " "

perceptions either where in something simple and individual, or did the mind perceive some real connection among them, there would be no difficulty in the case." Here is a tacit admission that apriorism alone can solve the problem of knowledge. We may therefore affirm, first, that there are significant apriori elements in the philosophy of Hume, and second, that he who would transcend Hume must show how intelligent experience is possible, or how the particular impressions of experience may be rationalized and interpreted in order to furnish a valid knowledge of the objective world.

We turn now to the philosophy of Thomas Reid.

Reid.

The first noteworthy attempt to solve the problems bequeathed by Berkeley and Hume was made in Scotland and gave birth to the Common Sense school of philosophy.[1] In the doctrines of this school as expounded by Reid, the founder, — who alone of the prominent philosophers of Scotland comes legitimately within the limits of our theme —

1. Reid's "Inquiry into the Human Mind etc," was published in 1764 or 14 years [illegible]

there is little that interests us. To rid himself of the conclusions of Berkeley and Hume, he rejects Locke's representative theory of perception, from which they had been logically deduced. But his substitute is by no means a decided improvement on Locke, since his theory of perception through suggestions given in sensations is as prolific of scepticism as was Locke's theory. His twelve fundamental, undemonstrable facts of consciousness, upon which all certainty rests, which are present in all men, and are not constructed but merely found suggest the necessity of an apriori Self which discovers and recognizes them as valid and ultimate. It might also be asked whence the twelve primitive judgments, the only consistent answer being they are inherent in the mind.

We next turn back in our chronology a little more than half a century to consider the further contributions of the idealistic philosophy to apriorism. And since Christian Wolff concerned himself mainly with working over the doctrines of Leibnitz into a more methodical form, and

in adding largely to the philosophical vocabulary, we shall confine our attention to Leibnitz as the only one prior to Kant who bears any special relation to our theme.

Leibnitz

Seeking to rectify Descartes, who, ignoring the principle of causation, made substance out of the two incommensurable attributes of thought and extension, and also to escape the pantheism of Spinoza, — a logical outcome of Cartesianism — Leibnitz claimed that a correct idea of substance alone would furnish a solution for the much befogged questions of philosophy. The monad, a metaphysical point, an immaterial self-active force center, is his revised notion of substance. We concern ourselves with this only so far as it is related to his psychology, which he called Pneumatics.

All monads possess percipient activity and hence are souls. While it is impossible for monads reciprocally to influence each other, it

is possible that one in a group may perceive the others so clearly, that they in comparison to it, are but bare monads. Such a monad is called the entelechy or soul of the group. There are material souls, animal souls, and human souls of all ranks, from the least hint of a soul to the Universal Spirit. The human soul is distinguished from the animal soul by its connection with a more complex physical organism, but more especially by the greater clearness of its perceptions. By self-contemplation a human soul becomes personal spirit. By the soul's own power, and according to its own inherent principles, sensations are transformed into thoughts and knowledge. But below the plane of self contemplation there is a realm of unconscious perceptions ruled only by laws of association.

All ideas are innate. There are no adventitious ideas, none that we ourselves make, as Descartes so frequently alleged. Knowledge, in any universal sense, is attained neither directly or indirectly through the senses, but by the activity of the soul within itself. Sense-perception

is an indistinct cognition, which may be made clear by the mind's own activity. The senses are not able to discover any unconditioned and necessarily valid truths. While they make such truths accessible to us, and thereby enable us to corroborate them, in part, by many individual instances, no amount of particular truths in the present can suffice as a ground for any one universal truth. For it does not follow that what has hitherto happened will always happen again in the same way. Universal truths depend not on the senses, neither do they spring therefrom, although the senses may furnish the occasions by which they come into consciousness. Among them may be found all the truths of mathematics, which are true independently of any illustrations invented to demonstrate them, and also many propositions of Logic, Metaphysics and Morality. Indeed, Leibnitz held that the entire arithmetic and geometry, together with many universally valid and necessary propositions from the other departments of knowledge lie in us potentially

so that we, in order to discover them, need only attentively to consider and arrange what is already in us without depending on any knowledge gained through experience and tradition.[1] Hence the mind is no mere 'tabula rasa' registering impressions passively received, for without activity the soul can as little exist as any other being. It can exist only as an active percipient power. To be passive would be to be non-existent. It is rather like an uncarved block of marble whose hidden veins predetermine its later form. Hence to Locke's:- Nihil est in intellectu quod non prius in sensu: must be added, 'nisi intellectus ipse.'

Descartes' doctrine that "nothing exists in the mind except that of which it is clearly conscious," is also rejected by Leibnitz. Repeatedly he affirms that all our ideas are innate and that much of the knowledge of which we have once been conscious is stored up in the soul. But in order to avoid Locke's objection to innate ideas, he held that the inateness was not actual but virtual. He asks, "How

1. Cf. Preface to "New Enquiry concerning Human Understanding"

many perceptions, recollections and thoughts are present in every moment of my life? Manifestly very few. And how many conceptions have I that are very dark? (1) Manifestly very many. Where then is the entire knowledge of the learned, the entire life's experience of the individual, of which, in any short interval of time, a disappearing minimum is, and can be present in the halo of consciousness. Is the, as it were, immeasurable measure of my store of thought to be entirely annihilated, as long as I may be conscious of only a limited part thereof? Manifestly no. For just as a multitude of perceptions may be reproduced, so also may the ideas at present forgotten and latent, come, by thousands of occasions, involuntarily into the mind again, or may be drawn forth from their forgotten state by reflection. Therefore though the absent conceptions are not in consciousness, they are in the soul, not free indeed, but latent, not as 'ἐνεργεία' but as 'δυνάμις', as implicities but not as living powers." Further, universal truths may exist in the soul of the newborn babe, unconscious, obscure, but may

1. "New Enquiry" Bk II. Ch I. Sec 5. (Translated from German (Feuerbach's Darstellung der Leibnizischen P. Sec 18 19 42-9

be brought into consciousness by sense-perception and reflection just as leaves and buds come forth under the influence of light, warmth, and moisture. But some innate truths, such as the difficult propositions in mathematics can come into consciousness only gradually and by great pains. Nevertheless they are innate.

Leibnitz diverges greatly also from Locke in his theory of perception. Indeed he makes experience itself innate. All perceptions are produced only from within. No provision is made for a stimulus from without though its necessity is confessed. Everything is implicit in the all-conditioning and all-conditioned system of Pre-established Harmony which is the only guarantee of a parallelism between thoughts and things. The relation of the mind to its objects is illustrated by the two clocks which, at the outset, were so perfectly constructed and related as to correspond for ever without further interference. This is opposed to Locke's view, where one clock causes the change in the other, and also to Occasionalism where identical changes are made in both.

There are two kinds of truths. Truths of reason, and truths of fact, which correspond respectively to truths apriori and aposteriori. Reason is the chain which connects all universal and necessary truths. Finally, the soul itself is innate and is furnished with ideas of existence, substance, space, time, number, cause, etc, which are the norms of the souls activity and without which it cannot be said to exist. Inherent in the soul also are many universal and necessary propositions belonging to all the phases of the mental life.

Thus in Leibnitz's system there is a wide-sweeping apriorism. While its cardinal features are impassable individualism, rigid determinism and pantheism, while it contains no solution for the problems of evil and error, it nevertheless wrought a great and timely work in building up a theory of knowledge unconditioned by the senses and untrammelled by tradition. If Leibnitz influenced his times only to the extent of causing 'nisi intellectus ipse' to Locke's 'Nihil est in intellectu etc., to be added, this alone would entitle him to a prominent place in modern philosophy.

Transition to Kant.

Thus far apriorism has consisted chiefly of innate ideas, innate axioms, innate judgments, innate universal and necessary truths and the subjectivity of sense perception, or in other words upon what was supposed to be given in experience. The synthesizing work of the mental self has been, for the most part, either misunderstood, ignored, or ruled out. Even in mathematics Hume declared that there was no super-imposed synthesis but only analytic judgments. The notion of causation was likewise repudiated since it could not be discovered in the sequence of sense impressions, which constituted all experience, nor yet could it be given apriori, since, according to Hume, apriori knowledge includes only that which is identical, and an effect is altogether different from its cause. Thus, on the empirical side, rational experience was made impossible as soon as Locke was made consistent, and, on the other hand, the dogmatists had virtually removed the grounds and data of knowledge beyond the reach of experience or of the self. They regarded

all knowledge, and indeed the entire world, merely as an order in the divine consciousness, or as the logical implication of the cosmic idea, and thereby made knowledge inaccessible to us. For it is obvious that the same difficulties beset a knowledge of an order in the divine consciousness as attend a knowledge of the objective world. Both must be brought into individual consciousness before knowledge is possible. The task, then, yet awaiting accomplishment is the reconciliation of these widely separated points of view. This can only be done by the introduction of a new conception capable of spanning the gulf between them, and of assimilating the multitude of established psychological facts contained in each. This Herculean task was grandly, though by no means perfectly, achieved by the founder of the Most Modern philosophy, and the greatest of German philosophers, Immanuel Kant. We now turn to his "Kritik der reinen Vernunft," but only to summarize the most important conclusions there established, in order that we may the better complete our theme.

Kant.

Since it is universally acknowledged that every species of knowledge is a judgment, attention must first be paid to the origin and forms of judgment. There are two classes of judgments, analytic and synthetic. The synthetic judgments are divided into apriori and aposteriori. The analytic judgment merely explains the subject without extending our knowledge of it, as when we affirm that a triangle is a figure with three sides. The synthetic judgment, on the other hand, predicates something of the subject which is not contained in it as its characteristic. The aposteriori synthetic judgment can furnish no other propositions than such as are attained by induction and which therefore possess no unconditioned but only a conditioned certainty. Hence they yield no universal and necessary truths. But as many such truths exist, unconditioned by experience,— the empiricists themselves being witnesses,— they must, therefore, be synthetic judgments apriori.

They abound in mathematics especially. Axioms in geometry and arithmetic which hitherto have been declared analytic, on stricter examination turn out to be synthetic. That the straightest line is the shortest distance between two points, or that 2×2=4, is by no means evident, through a mere analysis of the line or numbers. They are truths synthetically produced, though the process may be so subtle as to escape detection. This is also true of many of the propositions of pure physics dependent on the laws of identity and causation, which are not only not given in experience but are also unconditioned by it. Hence the question naturally arises, "How are synthetic judgments a priori possible?"

In order to answer this all-important question, Kant seeks to determine the origin and nature of these judgments and begins with the notions of time and space. These are found to be forms of intuition neither produced out of nor conditioned by experience, since they are the presuppositions of experience. Without the former the mind would have no

form under which to relate events. Hence the notion of succession would be impossible and memory would be unthinkable. Without the latter – the spatial form of intuition, – there would be no possibility of referring sensations to their occasions, a mental process so unobtrusive as to be adjudged instinctive by the empiricist. Hence time and space are forms of mental synthesis and are absolute presuppositions of experience. All the sensuous content of experience must be related and moulded in these forms before they mean anything for the mind.

From the notion of different times we get the idea of number, and hence are possible all the apriori, synthetic judgments of arithmetic. Upon the space intuition all geometry rests as an apriori synthetic science. On both of these forms of intuition we build up the concektion of motion necessary to the existence of pure physics or mechanics. Beside these there are other ultimate conceptions, or categories, equally essential to the rational coherence of ideas in knowledge, since they furnish the formal elements

in all cognition. They were deduced by Kant from his twelve apriori judgments which are subsumed under four classes, since all objects of perception must come under each class in order to become objects for the mind. The classes of judgments and categories corresponding thereto may be tabulated as follows.

	Judgments.	Categories.
I. Quantity.	Universal.	Unity.
	Particular.	Plurality.
	Singular.	Totality.
II. Quality.	Affirmative.	Reality.
	Negative.	Negation.
	Limited.	Limitation.
III. Relation.	Categorical.	Inherence and Subsistence.
	Hypothetical.	Causality " Dependence.
	Disjunctive.	Reciprocity or Interaction.
IV. Modality.	Problematic.	Possibility and Impossibility
	Assertoric.	Existence " Non-Existence.
	Abodictic.	Necessity " Contingency.

The categories give universal and necessary relations to sense impressions and thereby make rational experience possible. Only as the mind

brings all its objects under the forms or conceptions of the categories do they exist for intelligence. This is the answer to the question necessitated by Hume's revision of the philosophy of Locke, viz., "How is experience possible?"

Corresponding to the system of categories there is also a system of apriori principles though each category does not express a particular principle. The most important among them are those which Kant designates as the 'Analogies of Experience'. The first analogy, the principle of the persistence of substance is stated thus: "Bei allem Wechsel der Erscheinungen beharrt die Substanz und das Quantum derselben wird in der Natur weder vermehrt noch vermindert." The second analogy is the principle of causality, and the third, that of universal association. Thus, the answer to the transcendental question, "How are synthetic judgments apriori possible?" is by the intuitions, categories, and formative principles which belong to the structure of mind and determine its procedure. But Kant fails to grasp the full significance of his conclusions when he

makes the order and connection of ideas absolutely indifferent to that among things, since knowledge of things can be valid only as there exist a perfect parallelism between thoughts and things.

Without entering more fully into the details of Kant's epistemology it is manifest that he advanced so much beyond his predecessors as to give an almost new meaning to the term aprioriism. The distinction of the material from the formal elements of knowledge, the individual from the universal; the reduction of the manifold of the senses to the unity of self-consciousness by the synthesizing work of a unitary mental subject; the deduction and formulation of the judgments and categories; are achievements which will always entitle Kant to the thanks of the thinking world. While his predecessors had reluctantly consented to the existence of some universal and necessary truths, without furnishing more than a hint as to their origin, he shows that they abound and that many of them are among the original furnishings

of the mind. While they sought to explain mathematics and all experience without synthesis, he proved that both existed only through synthesis. While they sought only to describe the grounds of cognition, he explained them. While they endeavored to solve the problems of knowledge by discovering the processes of knowledge in experience, he went deeper and disclosed the conditions and presuppositions of knowledge. He who would know the philosophy of our times must first well learn the philosophy of Kant, and he who finds the sure foundations of apriorism also finds the final resting-place and tombstone of empiricism.

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